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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,143	01/20/2004	Lewis R. Dove	10020701-1	4168

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AGILENT TECHNOLOGIES, INC.  
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EXAMINER

LEE, BENNY T

ART UNIT PAPER NUMBER

2817

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Please find below and/or attached an Office communication concerning this application or proceeding.



The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 7, 9, 12; 15, 16, 18 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ishikawa ('557), of record.

Ishikawa discloses in general a transmission line comprising: a substrate (1) of dielectric material (e.g. a ceramic material such as barium titanate as described at col 13, ls 14, 15) having a grounded conductor (2) deposited on or overlying a lower or rear surface thereof and a plurality of microstrip conductor lines (3) disposed at a front surface thereof, as described at col 12, ls 19-25. With respect to the embodiment of Fig. 11, the microstrip conductor lines (3) is sandwich between the dielectric substrate (1) and respective dielectric layers or "mounds" (6) which are adjacent each other and deposited as to overlie the corresponding microstrip conductor line (3). Moreover, note that an upper ground shield (8) is deposited as to overlie each dielectric mound (6). Also, as evident from fig. 11, respective conductive vias (9) electrically connect the upper ground shields (8) to the grounding conductor (2) through conductive ground "traces" (4) located about the conductors (3). As evident from fig. 1, the sections of ground conductor layer (40) can be properly characterized as ground "traces".

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 10, 11; 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the above rejection as applied to claims 1, 15, respectively above, and further in view of Dove et al ('979), of record.

The above combination meets the claimed invention except for the use of KQ dielectrics formed as a thick film dielectric.

Dove et al discloses that the use of KQ dielectrics, especially in shielded coaxial multi-layer structures, is conventional in the art.

Accordingly, in view of the recognized teaching in Dove et al, it would have been obvious to have further modified the dielectric layer and mounds of the combination to have been KQ dielectric material, especially in view of the their recognized conventional use in shielded coaxial multi-layer structures, such as in the combination.

Applicants' arguments filed 23 August 2006 have been fully considered but they are not persuasive.

With regard to claim 1, applicants' have argued that the Ishikawa reference fails to disclose that the conductors are "encapsulated" between the layer of dielectric and the

corresponding dielectric mound. In particular, it has been argued that Ishikawa discloses that a microstrip conductor (3) is encapsulated between dielectrics (5, 6) within a groove surrounded by metallization (4) and does not teach that the microstrip conductor (3) is encapsulated between the “mound” and the underlying substrate “layer” and would in fact teach away from that by virtue of the intervening metallization layer (4) between the microstrip conductor (3) and the dielectric layer (1). Similarly, with regard to claim 15, applicants’ have argued that the Ishikawa reference fail to disclose the step of “depositing a plurality of conductors on a layer of dielectric”. In particular, applicants’ have asserted that Ishikawa discloses the depositing of microstrip conductors (3) on dielectric (5), which is in a groove and is separated from substrate (1) by a metallization film (4), and as such would have taught away from the depositing of the plurality of conductors on “a layer of dielectric”. Finally, with respect to the rejection of claims 10, 11 and 19, applicants’ have asserted that the Dove et al reference does not make up for the features missing from Ishikawa.

In response to applicants’ arguments, the examiner offers the following rebuttals: First, the Ishikawa reference discloses that the microstrip conductor (3) is indeed “encapsulated” between the substrate layer (1) and the dielectric “mound” (e.g. 6). While it is acknowledge that a metallization film (4) and a dielectric (5) disposed in a groove are also interposed between the conductive microstrip (3) and the substrate layer (1), the presence of these features does not negate the fact that the microstrip conductor (3) would still have been considered to have been “encapsulated” by the “mound” (e.g. 6) relative to the dielectric substrate (1). In other words, even if there are intervening features between the microstrip conductor (3) and the dielectric substrate (1), the microstrip conductor (3) would have none the less been considered to have

been “encapsulated” with respect to dielectric substrate (1) through the dielectric “mound” (6), the dielectric (5) in the groove and the metallization film (4), by one of ordinary skill in the art. It should be noted that if it is applicants’ intent to infer that the conductor is to be --directly-- encapsulated between the dielectric “mound” and the “layer of dielectric” (i.e. without any intervening features), such an interpretation would not have been supported by the presently claimed invention. In other words, the claimed invention does not exclude encapsulation without intervening features, and as such the Ishikawa reference, as set forth in the above rejection, would have met the claimed invention. Secondly, with respect to the rejection of claim 15, note that Ishikawa discloses that the plurality of conductors (i.e. microstrip conductors 3) would indeed have been considered deposited on the layer of dielectric (i.e. substrate 1), despite the presence of intervening dielectric (5) in the groove and metallization film (4). In other words, even with presence of intervening dielectric (5) in the groove and metallization film (4), the microstrip conductor (3) would none the less been considered to have been “deposited” on the dielectric substrate (1), within the broadest reasonable interpretation, especially since the dielectric substrate (1) would have provided support for the microstrip conductors (3), as well as support for the intervening features (4, 5), which would have been deposited onto the surface of the dielectric substrate (1). Again, if it is applicants’ intent to infer that the deposition of the conductor is to be --directly-- onto the surface of the dielectric layer, without any intervening features, such a limiting interpretation is not present from the presently claimed invention. Accordingly, the Ishikawa reference would still have met the claimed invention, as presently claimed. Thirdly, with respect to the rejection involving the Dove et al reference, it should be noted that such a reference was relied upon to provide, inter alia, the obviousness of using KQ

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dielectrics and not necessarily to provide for supposedly lacking features in Ishikawa. As pointed out in the above prior art rejections and rebuttal to applicants' arguments, the Ishikawa reference does indeed meet the limitations of the claimed invention.


Claims 4, 6, 8, 13, 14; 17, 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number (571) 272-1764.

B. Lee

  
BENNY T. LEE  
PRIMARY EXAMINER  
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